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| 10/681,287 | 10/09/2003 | Krishna Balachandran | 29250-001082/US | 9239 |
| <div>7590 09/10/2007 HARNESS, DICKY & PIERCE, P.L.C. P.O. Box 8910 Reston, VA 20195</div> | | | <div>EXAMINER LAM, DUNG LE</div> | |
| | | | <div>ART UNIT 2617</div> | <div>PAPER NUMBER</div> |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/681,287 | Applicant(s) BALACHANDRAN ET AL. | |
| | Examiner Dung Lam | Art Unit 2617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

The drawings 2C and 2D are objected to because the drawings do not correspond to the written descriptions of paragraphs 28 and 29 in which the flow that is monitored seems to be from flow 1 to flow 2. They both show a change from Flow 2 to Flow 2 which is different from what is described in paragraphs 28 and 29.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Paragraph [0032] is the heart of the invention but it is barely given any explanation and is not detailed in the drawings.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The independent claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claims 1 and 10 recites, "only if the second frequency is not known to the network based on a first flow identifier information previously registered by the mobile station with the network". The underlined limitation is not found in the specification and applicant also did not cite where the limitation can be found in the spec either.
2. Claims 1-13 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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- a. Regarding paragraphs [0028], it is not clear why the description to fig 2C results in a N/A for flow based registration. Why wouldn't this be a Y - registration required? (table 1).
- b. Regarding paragraph [0029], what flow (1 or 2) is monitored and when is it switched?
- c. The three registration systems are well described, however in the hybrid system it is only hinted as to how the system could know what frequency the mobile is on, based on the flow being registered. What exactly does this mean/ entail? Clearly, if only the frequency changed, then the system could know what frequency to page based on the flow in each sector, but the claim specifies that both the flow and frequency change, how then could the system know a frequency based on a flow - if it changed? In other words, if both the flow and frequency are changed, then how would the system know what frequency the new (unknown flow) would be on?

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 1-3, 5, 7-8, 10-11 rejected under 35 U.S.C. 102(e) as being anticipated by **Sinnaraja** (US Pub No. 2003/0114177):

2. Regarding **claim 1**, **Sinnaraja** teaches a method triggering generation of a registration of a mobile station in a network supporting broadcast multicast services, comprising triggering generation of a registration message in response to a change triggering a generation of a registration following a change in frequency and flow (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]), from a first frequency to a second frequency and first flow to a second flow, that is monitored by the mobile station, only if the second frequency is not known to the network based on flow identifier information previously registered by the mobile station with the network (para. 64, 66, 70-71, 82).

3. Regarding **claim 5**, **Sinnaraja** teaches a method of paging a mobile station comprising paging a mobile station on a given frequency in response to a registration

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message received from the mobile station indicating the mobile station's presence on that given frequency (para. 59, 79 and 81), wherein said registration message is generated based on a change in frequency, from a first frequency to a second frequency, that is monitored by the mobile station at time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]), if the second frequency is not known to the network based on flow identifier information previously registered by the mobile station with the network (para. 64, 66, 70-71 and 82).

4. Regarding **claim 10**, **Sinnaraja** teaches a method of determining a frequency of broadcast multicast content being monitored by a mobile station in a wireless network, comprising: generating, at the mobile station, a registration message in response to a change in flow and frequency At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]), if the frequency monitored by the mobile station that is not known to the network based on flow identifier information previously registered by the mobile station with the network (para. 62 and 63); and determining an updated frequency being monitored by the mobile station from the generated registration message (para. 64, 66, 70-71 and 82) .

5. Regarding **claims 2, 7, and 11**, **Sinnarajah** further teaches the first flow identifier information is a broadcast-multicast service flow ID that the mobile station had previously registered with the network ([0070-0071]).

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6. Regarding **claims 3 and 8**, **Sinnarajah** teach that the first or second frequency monitored by the mobile station is a frequency of broadcast multicast content being received by the mobile station ([0044-0045]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims **1-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over SWG23 BCMCS ADHOC: "Signaling Support for 1x BCMCS", 28 August 2003, pages 1-53 (simply referred to as "**3G-1x-BCMCS**") in view of **Sinnaraja** (US Pub No. 2003/0114177).

8. Regarding **claim 1**, **3G-1x-BCMCS** teaches a method of triggering registration of a mobile station in a network supporting broadcast multicast services (p.18, 19, 26, 28, 30) comprising: triggering generation of a registration message in response to a change in frequency, from a first frequency to a second frequency (p. 26, lines 8 – 10 & lines 35 – 39, p. 28 lines 16-22 & p. 30 lines. 27 & 31-35) that is monitored by the mobile station (section 2.6.2.9.3, p. 20 lines 4-14), if the second frequency is not known to the network based on a first flow identifier (BCMCS_FLOW_ID) information previously registered by the mobile station with the network (p. 19 lines 21-29; p. 26 lines 8 – 10 & lines 35 - 39).

However, **3G-1x-BCMCS** does not explicitly teach that the triggering of generation of a registration is based on a change in frequency and a change in flow, from a first flow to a second flow and from first frequency to second frequency. In an analogous art, **Sinnarajah** teaches the concept of triggering a generation of a registration following a change in frequency and flow, from a first frequency to a second frequency and first flow to a second flow. (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0066-0071], Fig. 3, [0082]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to trigger a registration message not only based on a change in frequency as taught by **3G-1x-BCMCS's** but also based on a change in flow and frequency as taught by **Sinnarajah's** since this combination makes the registration process more robust and efficient by taking into account of the possibility of a combination of change in flow and frequency.

9. Regarding **claim 5**, **3G-1x-BCMCS** teach a method of paging a mobile station in a wireless network comprising: paging a mobile station on a given frequency based on a registration message received from the mobile station indicating the mobile station's presence on that given frequency (p. 20 lines 4-9) and a registration is triggered based on a change from a first to a second frequency, if the second frequency is not known to the network based on flow identifier (BCMCS_FLOW_ID) information previously registered by the mobile station with the network (p. 19 lines 21-29; p. 26 lines 8 – 10 & lines 35 – 39); However, **3G-1x-BCMCS** does not explicitly teach that the triggering of

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generation of a registration is based on a change in frequency and a change in flow, from a first flow to a second flow and from first frequency to second frequency. In an analogous art, **Sinnarajah** teaches the concept of triggering a generation of a registration following a change in frequency and flow, from a first frequency to a second frequency and first flow to a second flow. (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0066-0071], Fig. 3, [0082]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to trigger a registration message not only based on a change in frequency as taught by **3G-1x-BCMCS's** but also based on a change in flow and frequency as taught by **Sinnarajah's** since this combination makes the registration process more robust and efficient by taking into account of the possibility of a combination of change in flow and frequency.

10. Regarding **claim 10**, **3G-1x-BCMCS** teaches a method of determining a frequency of broadcast multicast content being monitored by a mobile station in a wireless network (p. 20 lines 8-9), comprising: generating, at the mobile station, a registration message based on a change in frequency monitored by the mobile station that is not known to the network based on flow identifier information previously registered by the mobile station with the network (p. 20 lines 4-8); and determining an updated frequency being monitored by the mobile station from the generated registration message (p. 20 lines 8-9). However, **3G-1x-BCMCS** does not explicitly teach that generation of a registration is based on a change in frequency and a change in flow, from a first flow to a second flow and from first frequency to second frequency.

In an analogous art, **Sinnarajah** teaches the concept of triggering a generation of a registration following a change in frequency and flow, from a first frequency to a second frequency and first flow to a second flow. (At time T4, when the frequency is changed to **fy** and flow is changed to HSBS channel **302c**, a registration occurs, [0068-0071], Fig. 3, [0082]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to trigger a registration message not only based on a change in frequency as taught by **3G-1x-BCMCS's** but also based on a change in flow and frequency as taught by **Sinnarajah's** since this teaching makes the registration process more robust and efficient by also taking into account of the possibility of a combination of change in flow and frequency.

11. Regarding **claims 2, 7, and 11**, **3G-1x-BCMCS** and **Sinnarajah** teach a method wherein **3G-1x-BCMCS** further teaches the first flow identifier information is a broadcast-multicast service flow ID (p. 3 line 7) that the mobile station had inherently previously registered with the network (p. 26, lines 8 – 10 & lines 35 - 39).

12. Regarding **claims 3 and 8**, **3G-1x-BCMCS** and **Sinnarajah** teach that the first or second frequency monitored by the mobile station is a frequency of broadcast multicast content being received by the mobile station (**3G-1x-BCMCS**, p. 19 lines 21-29).

13. Regarding **claim 4, 9 and 13**, **3G-1x-BCMCS** and **Sinnarajah** teach teaches a method, wherein triggering generation of the registration message includes the mobile station: changing from the first frequency to the second frequency (**3G-1x-BCMCS**, p. 19 lines 21-29); determining whether presence of the mobile station's monitoring of the

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second frequency is known to the network, based on a broadcast-multicast service flow identifier that the mobile station previously registered with the network (**3G-1x-BCMCS**, p. 19 lines 5-7); and transmitting a registration message to the network, if the second frequency does not correspond to a known frequency based on the broadcast-multicast service flow identifier (**3G-1x-BCMCS**, p. 19 lines 21-29).

14. Regarding **claim 12**, **3G-1x-BCMCS** and **Sinnarajah** teach a method of claim 10, wherein the frequency monitored by the mobile station is contained in the registration message (p. 28 lines 16-22).

Response to Arguments

Applicant's arguments with respect to claim 6/14/07 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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